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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,509	03/14/2001	Yoshitaka Dansui	L7016.01105	1885

7590

08/21/2003

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EXAMINER

WINTER, GENTLE E

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/805,509

Applicant(s)

DANSUI ET AL.

Examiner

Gentle E. Winter

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant provides a translation of Japanese Publication No. 09-092279, and states:

From the above excerpt, it is clear that Yb<sub>2</sub>O<sub>3</sub> was not treated with an aqueous alkaline solution and an oxidizing agent before assembling the battery. Thus, it is clear that JP '279 does not teach the feature recited in the present claims.

1. Applicant arguments are largely directed to pointing to the process by which the Yb<sub>2</sub>O<sub>3</sub> was formed.
2. The arguments have been carefully considered but are not persuasive. Since there does not appear to be a dispute that the prior art of record disclose the Yb<sub>2</sub>O<sub>3</sub> and the special characteristics imparted by the processing are not apparently in the claims, other than by mention of a process by which the ingredient was derived, the rejection is maintained. Claims 4 and 5 have not been amended, and remain rejected for the reason of record. It is noted that if applicant proves that a product, which is materially different from that disclosed in the applied references exists the rejection seemingly would withdrawn and a new search would be undertaken to identify whatever characteristic is present. However, at this time it is not clear what characteristics the processing steps impart.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 09-092279. Hereinafter '279.

2. With specific respect to claim 1, disclosing a nickel positive electrode active material comprising nickel hydroxide particles (whose main component is nickel hydroxide) and at least one rare earth compound (ytterbium compound) obtainable by treating a rare earth oxide with an aqueous alkaline solution and an oxidizing agent. See e.g. page 2, column 2, line paragraphs 7-12, and the provided abstract translation.

3. With specific respect to claim 2, disclosing that the rare earth compound is at least one selected from the group consisting of an ytterbium compound (ytterbium compound) obtainable by treating ytterbium oxide with an aqueous alkaline solution and an oxidizing agent. See e.g. page 2, column 2, line paragraphs 7-12, and the provided abstract translation.

4. As to claim 3, disclosing that the total amount of the rare earth compound is in the range of 0.1 to 4.0 wt % based on the nickel hydroxide particles. The '279 reference in paragraph 7 discloses that  $\text{Yb}_2\text{O}_3$  is present in the nickel hydroxide at 2.5 Wt. %. See e.g. paragraph 0007.

5. As to claims 6 and 7, the recitation of the type of hydroxide or oxidizing agent is not relevant to the invention. Applicant only indicates that the rare earth is "obtainable by treating" a rare earth oxide with an aqueous alkaline solution and an oxidizing agent. This recitation only requires that the rare earth be obtainable in the indicated manner. Since the rare earth elements disclosed in the dependant claims come within this requirement, the limitation is inherently met.

Art Unit: 1746

6. As to claim 8, disclosing a nickel metal hydride storage battery comprising a positive electrode mainly composed of a positive electrode active material of claim 1, a negative electrode mainly composed of a hydrogen-absorbing alloy and a separator. The positive electrode active material of claim 1 is discussed above with respect to claim 1. The recitation of a “negative electrode mainly composed of a hydrogen-absorbing alloy and a separator” is disclosed in paragraph [0016] disclosing that the in nickel hydride battery of the invention, the alloy corrosion of a hydrogen storing metal alloy negative electrode is reduced, and an improved battery life cycle is obtained.

7. Claim 9 mirrors claim 1 and claim 10 mirrors claim 8 in many respects but instead of merely reciting “having characteristics obtained by...” recites a “rare earth hydroxide precursor”. The specification, at page 9 line 10 states:

In the specification, the term “rare earth hydroxide precursor” is used to mean a rare earth compound that is obtained by treating a rare earth oxide with an aqueous alkaline solution and the oxidizing agent.

8. While the claiming of a product by process is considered to be an acceptable from of claiming, the claim must recite the process, not simply the product. Since a rare earth oxide is a precursor to a rare earth hydroxide and because the reference discloses earth oxides and rare earth hydroxides the claimed invention is read on by the reference. See specifically the reference to the rare earth compound is preferable to exist in the positive electrode in the form of an oxide or a hydroxide. Since both the oxide (hydroxide precursor) and the hydroxide are disclosed the claims are anticipated.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over '279 as discussed above and United States Patent No. 6,136,473 Furukawa et al. Hereinafter Furukawa.

10. With specific respect to claims 4 and 5, further limiting claim 2, and disclosing that the rare earth compound is a combination of the yttrium/ytterbium compound and the lutetium compound, wherein the two compounds meet  $50 \geq X \geq 5$ , when weights of the yttrium compound and the lutetium compound are (100-X) % by weight and X % by weight, respectively. Each and every limitation of claim 4 is disclosed in '279 as set forth above, except that the '279 reference fails to explicitly disclose that the rare earth combination is yttrium-lutetium compound and ytterbium-lutetium compound. Wherein the two compounds (Y/Yb-Lu) meet  $50 \geq X \geq 5$ , when weights of the yttrium (or ytterbium) compound and the lutetium compound are (100-X) % by weight and X % by weight, respectively. Furukawa discloses that two or more kinds of selected rare earth elements are ytterbium and lutetium, and a ratio of the content of ytterbium to the contents of ytterbium and lutetium is larger than or equal to 0.75 when converted to an amount of oxide. See e.g. column 5, line 44 *et seq.* also see e.g. column 28, lines 5-10. Ytterbium is disclosed as a specific example of a rare earth, Y, is also

Art Unit: 1746

disclosed as a desirable rare earth. The artisan would have been motivated to make the instant combination for the reason explicitly disclosed in Furukawa, namely, a composite compound having Yb and Lu as its principal component, for example, is inexpensive because it is formed as an eutectoid when separating and forming the rare earth element from ore. See e.g. column 5, line 51 *et seq.* Additionally the artisan would have been motivated to make the combination because Y, Ho, Er, Tm, Yb and Lu etc. have an effect of shifting the oxygen evolution potential to a more noble potential, thus reducing the likelihood of gas evolution during overcharging. See also column 25, line 48-54, disclosing Yb and Lu and optionally Y.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1746

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403.

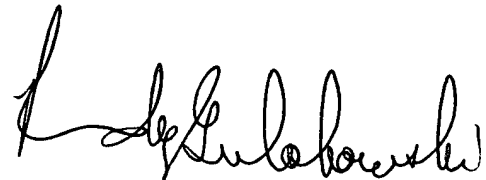
The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. The direct fax number for this examiner is (703) 746-7746.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter  
Examiner  
Art Unit 1746

August 20, 2003

A handwritten signature in black ink, appearing to read "Randy Gulakowski", is written over a horizontal line.

RANDY GULAKOWSKI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700